1: Epstein S-3 (no date) 1946 ME1 Lebanon ME1

to maintain their Lebanese citizenship abroad are Christians, the overwhelming majority of whom are Maronites.

(v) The natural increase among the non-Christian population of the Lebanon, and particularly of the Shi'ah and the Druzes, is more than twice as great as that of the Christian population. These facts can serve as a key to explain various developments, the influence of which may be decisive in shaping the social character and political fate of the Lebanon.

Any person reviewing the demographic problems of the Lebanon cannot but observe a number of factors common to the Christian population of the Lebanon and the Yishuv (the Jewish community) in Palestine. The natural increase of the Christians in the Lebanon is roughly equal to that of the Yishuv in Palestine.*

Against this, however, the Yishuv in Palestine has incomparably more potential reserve in the way of immigration from abroad than that which is available to the Lebanese Christians through the return of emigrants. And just as the chief concern of Zionism in Palestine is the creation of possibilities for the absorption of fresh immigrants from abroad, so the Christians of the Lebanon are faced first and foremost with the problem of preventing emigration from the country, and, in consequence, the creation of opportunities for absorbing emigrants who do return and who can return to their homeland, given suitable absorptive conditions. In addition, attention is devoted to the creation of opportunities for absorbing Christians who require a refuge.

The absence of dynamic economic resources in the Lebanon which could increase and expand the sources of livelihood for a progressive population has led to a steady emigration from the country since the middle of the last century. This process has chiefly affected the Christians whose requirements are more developed and whose living standards are higher than those of their Druze and Moslem neighbours; it has created a serious social and political problem which, taken together with their lower rate of natural increase, places the future of the Lebanese Christians in permanent danger.

Robert Widmer described the economic reasons for a migration from the Lebanon in the following passage:†

> "Lebanon is over-populated. As has been stated, the density of population is about 93 people to a square kilometre. In view of the topography of the country, its rocky mountains and its thin soil, its scarcity of mineral wealth, and its undeveloped industries, the land cannot support all its people. Consequently it is to be expected that some of them have to emigrate, leaving many dependent on their remittances."

As long as emigration was temporary, it was in many ways advantageous. To the general broadening of outlook resulting from contact with more advanced countries were added the material benefits of an increase in the country's capital (brought in by returning emigrants), an out-

* Fourteen pro-mille among the Christians of the Lebanon as against fifteen pro-mille among the Jews of Palestine.

† S. Himadeh, *Economic Organisation of Syria*, Beirut, 1936, p. 14.

7: Gulick E-5 (1952) 1955 ME1 Lebanon ME1

used as fuel in the city. In the village, brushwood is collected for fuel in addition to the importation of kerosene.

Animal manure is not used extensively as plant fertilizer because it is scarce. Recently this meager supply has been supplemented by British-made chemical fertilizers. Night soil is not used at all.

Animal husbandry is very limited. Each farmer has a yoke of oxen for traction and some have a few cows for milk. There are one or two donkeys in the village. Two farmers keep bees. The hives are formed in the large water jars (*jarra*) described earlier. Several of these, each split horizontally across the middle, are set in a row. The bees enter and go out by the narrow open neck. The honey is removed by separating the two halves of the jar, and half the honey is left for the bees. Some fowl are kept in the village, primarily for their eggs. Dogs are kept by some householders, and cats by more, for guarding and mousing, respectively. They are not treated as pets, or objects of affection.

It is the lack of water which so seriously limits agricultural productivity in the village. The possibility of drilling successful wells, even with modern equipment, is, as was noted in the first chapter, very remote. Irrigation lines, which affect the coastal strip lower than forty meters above sea level, have been extended almost to Ba'ishta from the River Ibrahiim to the south, and to the village of Madfuun, just north of Burbara, from the River Jawz. The Qumi has the misfortune of being halfway between these rivers, at the end of the line in both directions. It is also unfortunate in that since its coastline is more precipitous than surrounding areas, it has a smaller area of potentially irrigable land than the surrounding areas. Nevertheless, it would be of great help to the village if irrigation water could be brought to it.

CONCLUSION

This chapter can fittingly be closed with a series of quotations which summarize, high-light, or give wider perspective to some of the points which have been made. They do not require any comment except that of drawing the reader's attention to their dates, especially those of the last three.

> 1. It is probable . . . that it was on the slopes of the originally forest-clad mountains of ancient Phoenicia that rain agriculture began. (Lowdermilk, 1944, p. 415.)
>
> 2. The effort of the Lebanese has made this country capable of nourishing a relatively dense population. There are few mountainous regions so little favored by nature from which man has drawn such a great agricultural return. (Thoumin, 1936, p. 126; translation mine.)
>
> 3. The Syrian peasant is more like a miner than a farmer. (Himadeh, 1936, p. 92.)
>
> 4. Elsewhere man has cultivated the land: in the Lebanon he has made it. Elsewhere the harvest is the produce: here it is the soil. Man collects and carries to

7: Gulick E-5 (1952) 1955 ME1 Lebanon ME1

241 311 the hollow of the rock the vegetable mould; then hedges round with stones his wells of cunning fertility to conceal and increase them. From below you gaze upwards at barrenness: from above you look down on an arabesque of verdure: the rosy hues of the fresh turned furrows, the soft green of sprouting crops, nestling within the puckerings, grey and brown, of layers of limestone cast up on end, the faces of which are worn like glaciers. This is their arable land in the central range. (Urquhart, 1860, Vol. I, p. 1.)

5. One gets the vivid impression that the farmer of Bishmizzeen has lost heart and has lost faith in farming. He is looking somewhere else for a possible solution of his problem, which is now the problem of his growing children—employment outside the village, engaging in business, or emigration. (Tannous, 1941, p. 662.)

461 554 434 6. Nowadays young men, especially Maronites and other Christians, many of whom are educated, are unwilling to work on the land. They prefer jobs in the towns, and failing that many of them would rather live with their families, unemployed and aimless. So, too, the women of the more sophisticated villages no longer work long hours in the fields. A great part of the income of the Lebanese villages is currently derived from sources other than farming—from earnings in the towns, for example, or emigrants' remittances, or the renting of houses to visitors in the mountain summer resorts. (Lewis, 1953, p. 7.)

9:Lebanon G-5 (1952)1953 MEI Lebanon MEI

311

LAND USE

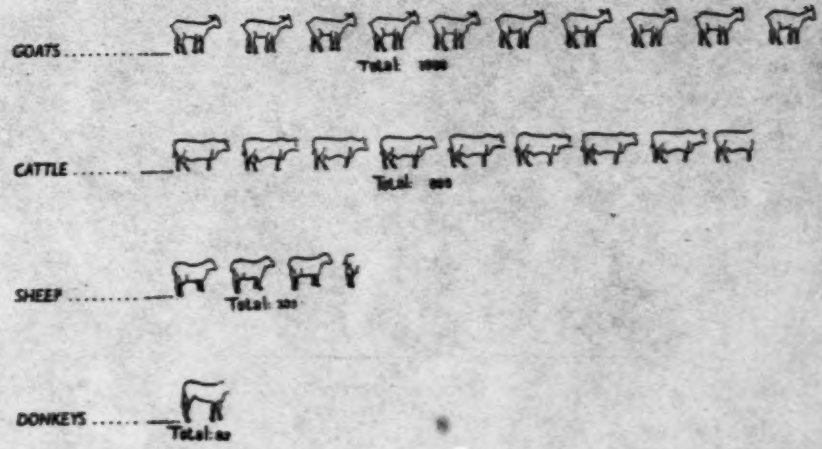
Land use in the eight project and control villages

231

LIVESTOCK

Total number of livestock in five project villages

Each unit 100 head



9:Lebanon G-5 (1952)1953 ME1 Lebanon ME1

241 into the air. A slight breeze is all that is necessary to blow the chaff to the side while the heavier grain falls to the earth. Later the kernels of grain are hand-sieved to remove rocks and other debris. The harvesting of grain entails a tremendous amount of the villagers' time and effort but, since he usually has nothing else to do, this method of harvesting is less costly to him than mechanized methods.

Land Utilization

311 No reliable statistics are available in Lebanon concerning the breakdown of the land area according to the use to which it is put. From published information it is not possible to obtain a breakdown of the area in each village devoted to dry crops and irrigated crops, or as to land devoted to pasture, forests or waste. For this reason it was necessary to depend on the mukhtar and other village leaders for these estimates. It is evident, therefore, that the data contained in Table III on land use distribution is not exact, but only the calculated estimates of reasonably well-informed sources. The discrepancies between the mukhtar's estimates and figures given by the cadastral office could not be checked without a land use survey. As in the case of population figures, each technician will have to proceed with caution in using these figures.

The mukhtars of the five project villages estimated the total area of these villages to be 28,000 metric dunums[1] (6,900 acres). In order to check this figure, the total area of the five villages was obtained from the cadastral office. While these files did not give the land-use breakdown, they showed the total area as 30,630 dunums. There is a discrepancy of 2,630 dunums between the figures supplied by the mukhtars and those obtained from the government. This may be due to a failure on the part of the mukhtars to include waste land in the total village area.

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(1) A metric dunum is equivalent to 1,000 square meters or approximately one quarter of an acre.

TABLE III

Land Use Determination

Kuwait Direct Desalination Project

Name of Defaulter	Land Use Determination Remarks or Measures							
	(1) Gross Land Area	(2) Industrial Land Area	(3) Pasture Land	(4) Forest Land	(5) Waste Land	(6) Gross Area Remarks for Measures	(7) Gross Area Land Covered by	(8) Reduction Land Chargeable To Gross Area (Col. 2 and 6)
PROJECT VILLAGES	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres
Sandland	7200	130	300	0	0	8000	9440	7
Sabaakiyah	650	450	200	0	0	1000	3870	30
Lendya	1410	40	0	0	50	1340	3230	3
Ein Nasriyah	3400	400	400	0	0	6000	7340	3
Al Ahmen	2000	8000	0	0	0	9000	6730	80
Sub-total of five project villages	17010	9440	1100	0	50	30000	30630	32

CONTROL VILLAGES								
Ein Hajjaj/yah	1400	100	0	150	500	2150	2380	5
El-'Akkawiyah	2500	400	0	1000	2000	5400	4320	7
El-Ghawiyah	10000	600	0	200	600 [1]	12000	9140	5
Sub-total of three control villages	14000	1100	0	1350	3100	19550	15840	6
TOTALS	31850	10140	1100	1350	3150	47550	46470	22

(1) Cattle used are mainly donkeys which consume (over eg. melons, equal 1/3rd of a hectare, and are equivalent to about one quarter of an acre (1.6 ha) in the control.

(2) per cent of this fine in the area which Tayibat is using for its tank farm and tractor hauling facilities.

but adequate for its needs and problems. Relationship with the central government was remote and did not go much beyond the payment of taxes and tithes. Loyalty to the kinship group struck a harmonious balance with loyalty to the village community. The church was one and the same for all.[1] Its authority was recognized and respected. The priest was always a member of the community and was elected by the people. Economic life was a mixture of private ownership of land requiring individual effort on the one hand and co-operation in various agricultural activities on the other. Education was simple, adapted to the needs of the community, and the teacher was a farmer, a member of the group. It was a type of education that emanated from and catered to the needs of community life.

After 1890, new factors, which were to a large extent beyond the expectation and control of the people, began to operate within the community, leading to a marked disruption in its harmonious organization. The most important among these factors or forces were the Protestant missions of the U. S., the silk factory, the educational movement, emigration and the new political-national spirit of the Arab World. The present article will deal with one of these—the emigration movement.

Why Did They Emigrate?

Disturbance of the land-population balance: Since the village began its

[1] The Greek Orthodox Church predominates in Biahmirseen and the whole of the Kura district.

311 existence, some two hundred and fifty years ago, the amount of its landed property has remained practically the same. In fact, there has been some decrease in the land area, due to the sale of some plots to outsiders. The early families, who established the village, got hold of the land and made use of it to the extent demanded by their needs. They were few in number and their needs were very simple.

311 121 163 Consequently, during the first one hundred and fifty years or so, the balance of the land-population relationship was weighted heavily on the land side—a much greater supply than there was demand. This gave the village people (consciously or unconsciously) a strong impetus to increase their numbers. At the same time, it was realized that one more child on the farm was a decided economic asset, and not a liability. The growing child cost less to be brought up than he or she could produce. No taxation, school fees, medical expenses, etc., to speak of, were involved. The people went on multiplying and increasing, and concomitantly, dividing and subdividing the land without being in the least concerned with the point to which the process was leading them.

The village population went on increasing, until about 1890. A balance was then struck—between the capacity of the village land and the number of people. The land could not support any more people, and there was a vague consciousness of a growing problem—what will the rising generation do? Meantime, the village

P. 63(B)

10:Tannous G, S-5 (no date) 1942.
ME1 Lebanon ME1

311 Meantime, the village
167 soil began to show signs of depletion. It could no longer give the same produce as when it was virgin soil; and the old methods of agriculture were not capable of rehabilitating the soil to the desired extent. This further disturbed the land-population balance and made the problem seem more acute. Emigration seemed to be the only solution.

163 The following table (I) of births
165 and deaths for a period of 40 years is a fair indication of the rate at

TABLE I. NUMBER OF BIRTHS AND DEATHS IN THE VILLAGE OF BISHMIZZEEN, NORTH LEBANON, 1870-1909

Period	Births	Deaths	Excess of births over deaths
1870-1874	108	27	81
1875-1879	94	40	54
1880-1884	72	34	38
1885-1889	95	44	51
1890-1894	118	32	86
1895-1899	123	34	89
1900-1904	184	40	144
1905-1909	178	45	133
TOTAL	972	296	676

which the village population was growing. The period covered is 1870-1909. The increase due to immigration may be neglected since only a few families came to settle in the village after 1870. It must be admitted that the writer cannot affirm the perfect accuracy of the table. It was calculated from the village church records and verified, as far as their memories permitted, by some of the village elders. The table shows a very high increase of births over deaths for that period—about 3.3 times.[2]

R 64(A)

[2] This means an average natural increase of about 12 per 1000 population for the period 1870-1909. Compare this rate with the following rates (1908-12): Austria,

3:Royal Institute of International Affairs U-4 (no date)1954 M1 Middle East
SYRIA MD1
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pensated partly by her transit trade in goods and partly by her gold and currencies market. Syria wanted a controlled economy with import restrictions, protection of Syrian industries, and independence from French financial policy, but Lebanon's interest was to encourage all trade movements and to rely on franc support: moreover, the two countries could not agree on the division of customs dues. After years of arguments and negotiations the economic partnership was finally terminated on 14 March 1950 and customs posts were established along the common frontier. Since then agreements have been drawn up despite Syrian reluctance, but little has been achieved towards the re-establishment of economic union. It is therefore necessary to consider the economies of the two countries separately.

(a) Syria

Agriculture

Over half but less than three-quarters of the cultivable area of Syria is, in fact, under cultivation. Since 1946 there has been a great increase in the number of pumps and tractors in use (there were 300 tractors in 1948 and 1,342 in 1951) but, as the following table shows, the cultivated area can still be extended.

ESTIMATES OF THE USE OF LAND, 1950

	Syria		Lebanon	
	(sq. miles)	*Percentage of Total*	*(sq. miles)*	*Percentage of Total*
Cultivable				
Cultivated under rainfall	8,400	12	803	20
Cultivated with irrigation	1,400	2	115	3
Potentially cultivable	14,000	20	700	17
Uncultivable				
Forests	1,600	2	285	7
Pasture	21,000	30	27	1
Desert, mountain and marsh	23,600	34	2,085	52
Total Area:	70,000	100	4,015	100

(Sources: FAO, *Yearbook of Food and Agricultural Statistics, 1952*; UN, Dept. of Economic Affairs, *Review of Economic Conditions in the Middle East, 1951–2.*)

Some progress in mechanized farming has been made in recent years, but much of the land is tilled as it was 2,000 years ago. The predominant form of land tenure is share-cropping by tenants on estates of large and medium size. Small holdings under 25 acres prevail in areas of intensive cultivation, and at present are estimated to constitute only 15 per cent of the total

3:Royal Institute of International Affairs U-4 (no date)1954 M1 Middle East
LEBANON ME1
SYRIA MD1

interest per annum. The Syrian private capitalist expects very large returns and the foreign private capitalist requires more security than is obtainable in the Middle East; thus the development of Syria must be financed either by the Syrian Government or by an international agency. Syria is one of the few countries to have refused American Point Four aid on principle, but she is a member of the International Bank for Reconstruction and Development and this organization has been studying some of the development schemes listed below.

1. *Drainage of the Ghab marshes.* Nearly 100,000 acres of land can be irrigated from the excess water of this area to improve agriculture and public health, and plans are well advanced.

2. *Euphrates barrage,* to provide 100,000 kws. of hydro-electric energy for irrigation and industrial needs. With this power it is hoped to irrigate half a million acres.

3. *Yarmuk and Barada rivers.* Hydro-electric schemes to give power to Damascus and the Hauran.[1]

4. *Latakia port.*[2] There have been complications over the award of the tender for this work, and construction had not effectively begun at the beginning of 1953.

5. *Khabur river.* Irrigation scheme for 22,000 acres.

6. Improvement of rail and road communications from Latakia to the hinterland and establishment of a network of all-weather roads in the Jezira.

7. *Rouj marshes.* Drainage to irrigate about 8,700 acres has already commenced.

If agreement can be reached to implement some of these schemes not only will Syria benefit but also the Arab refugees from Palestine may find employment and even homes.

(*b*) Lebanon

Much that has been said about Syria also applies to Lebanon and, to avoid repetition, only points peculiar to Lebanon are here outlined.

Agriculture

The table on p. 488 above gives the approximate division of the land in cultivable and uncultivable areas and the estimated acreage; the crop and yield of the main agricultural products are given in the following table.

[1] An agreement with Jordan was signed on 7 July 1953, but work has not yet begun.

[2] See above, p. 487.

25: Warriner S-5 (no date) 1948 MI Middle East
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Chapter VI

SYRIA AND LEBANON

LAND AND POPULATION

AT first sight, the main crop of Syria appears to be thistles, and so it is in fact: about half the land is under fallow every year, and the cultivated land is cropped only one year in two or even three. There are some districts with intensive cultivation, for instance, the oasis of Damascus, with its brilliant green crops irrigated by 'Abana and Pharphar'; but most of Syria is cultivated very extensively indeed.

In Syria and Lebanon together the area cultivated before the late war was some 5·8 million acres, but of this total only 3,900,000 acres were cropped each year, the remainder being fallow. The greater part of the cropped area was under cereals, about two-thirds being under wheat and one-third under barley.

In Lebanon, the whole of the cultivated area is cropped, and there is no uncultivated land which could be brought into cultivation. In Syria however there are large areas of cultivable land which are not at present cultivated, the total cultivable area being some 12½ million acres, of which only about one-third is under cultivation. Unfortunately this figure is only a rough estimate, and it is not clear how much of the area is cultivable under present conditions, or how much of it is marginal desert grazing. Some of it is undoubtedly cultivable under present conditions, and there is certainly no shortage of land in Syria.

SYRIA: AGRICULTURAL LAND, 1943[1]

Province	*Cultivable*	*Cultivated (including fallow)*
	Acres	*Acres*
Jezira	2,471,000	543,600
Euphrates	3,212,000	321,200
Aleppo	3,706,000	1,260,000
Homs	420,000	345,900
Hama	1,909,000	1,210,000
Damascus	1,062,000	345,900
Hauran	518,600	518,900
TOTAL	12,698,600	4,545,500

[1] Omitting the provinces of Latakia and Jebel ed Druz for which no figures are available; their cultivated area may be estimated at about half a million acres.

25: Warriner S-5 (no date) 1948 MI Middle East
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Syria MD1

SYRIA AND LEBANON

During the recent war there was an expansion of cultivation in Syria as a result of high prices and mechanization. The previous table shows the cultivable and cultivated land in different provinces and the distribution of these areas in 1943.

Little is known about the rate of population growth, but it is believed to be rapid. According to the most recent estimates the total in 1944 was 3,987,012, of which the population of Syria was 2,860,411 and of the Lebanon 1,126,600. The population of Syria was divided as follows:

SYRIA: POPULATION AT END OF 1943

Province	*Total*
Latakia	452,507
Aleppo	870,139
Hama	157,458
Homs	212,424
Hauran	112,842
Damascus	603,889
Euphrates	225,023
Jezira	146,001
Jebel ed Druz	80,128
TOTAL	2,860,411

(This estimate excludes the Beduin, whose number is estimated at 400,000.)

About three-quarters of this total, or about 2·1 million, are rural. The amount of cultivated land per head is 2½ acres, but because cultivation is so extensive the area actually cropped is only some 1½ acres.

Lebanon, by contrast with the dry plains of Syria, is intensively cultivated because of the high rainfall on the coast line; yields per acre are higher, and crops are more diversified, including citrus, olives, bananas; small irrigation schemes have been developed along the coast on the streams from the Mountain. The Lebanon depends for part of its grain supply on Syria, and all the cultivated land is cropped. The cultivated area in 1943 amounted to 1·3 million acres. The total population in 1944 was estimated to be 1,126,600; of this probably about 750,000 are rural, and the amount of cultivated land is about 1½ acres per head.

Grain production in Syria and Lebanon together before 1939 averaged 800,000 tons and rose to about 1 million tons during the recent war.

25: Warriner S-5 no date 1948 MI Middle East
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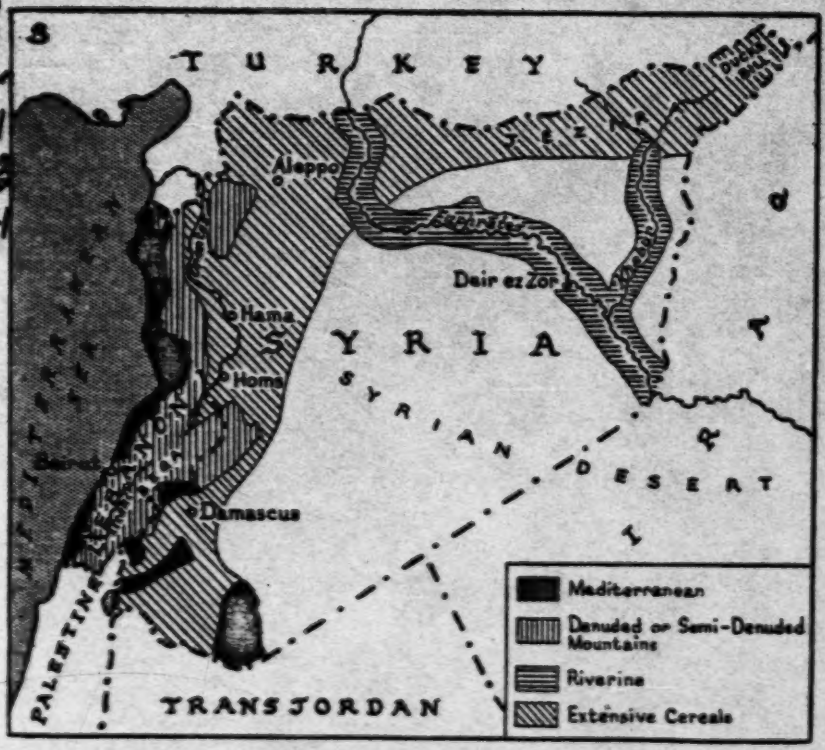

SYRIA AND LEBANON: AGRICULTURAL AREAS

GRAIN PRODUCTION IN SYRIA AND LEBANON, 1934–43

	Tons	Cwts per acre
Wheat		
1934	443,000	6·3
1935	504,000	7·5
1936	427,000	6·3
1937	468,800	6·6
1938	644,300	9·0
1943	624,280	7·3
Barley		
1934	292,100	7·8
1935	347,100	9·5
1936	308,100	8·2
1937	266,300	6·5
1938	383,400	9·0
1943	330,485	8·2

With a total rural population of about 2·8 million in 1943–4, the production of grain per head amounts to only 3·4 quintals or 6·4 hundredweights. Thus the problem for Syria is to in-

25: Warriner S-5 (no date) 1948 MI Middle East
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crease the productivity per acre and also to expand the cultivated area per head.

In the Lebanon, however, with its steep hillsides under intensive cultivation, there is a definite pressure on land resources. The limits of intensification appear to have been reached, and a large part of the village population supplements its income by work in the towns, and by remittances from abroad. If the land tenure system in Syria were less oppressive, room might be found on the land for settlers from the Lebanon, but as things are, the standard of living and status of the Lebanese peasant is higher; compared with the Syrian peasant he is a free man, and there is no inducement to leave the Mountain for the underpopulated plains of central or northern Syria.

LAND TENURE

Corresponding to these different methods of farming, there are different systems of land tenure.[1] In Lebanon individual small ownership is well established, and the pattern of village life, with its broad class of small peasant owners, few large farmers, and a growing class of landless labourers, resembles that of Europe.

In Syria, the greater part of the land is owned by city notables—the ruling class—and cultivated by small share-tenants. Though individual ownership exists in some districts, for instance the Beqa Valley and the oasis of Damascus, the most usual form of landownership in the plain districts of Syria is share-tenancy. The villagers bring their corn to the village threshing floor, and when the grain is threshed the landlord or his agent stands by and takes one-half of the grain. Towards this result he has contributed nothing; all labour, equipment, seeds, livestock, have been supplied by the tenant, so that his share is rent purely for the use of the land. The landlord is almost always an absentee, a city notable who only visits the land to collect rent.

The share taken by the landlord varies from district to district, and also varies with the condition of the land. According to an inquiry made by the French authorities, the usual division of the crop for non-irrigated cereals is 40–50 per cent to the

[1] The information which follows is mainly based on A. Latron, *La Vie rurale en Syrie et au Liban* (Beirut, L'Institut Français de Damas, 1936). The brilliant and profound study by Jacques Weulersse, *Paysans de Syrie et du Proche-Orient*, is an indispensable authority which unfortunately was received only after going to press.

29:Dunn S-4 (1952)1952 MI Middle East
Lebanon MEI

CHAPTER V

COTTON IN LEBANON

000 Lebanon is the smallest, the most cosmopolitan, and one of the most progressive countries in the Middle East. Beirut, the capital, is a modern, pleasant summer resort, whose shops are known over the world. Probably this contact with the world through Beirut explains the strong Western influence in the country.

But Beirut is not Lebanon, and tourism and commerce still are minor aspects of the economy, which still is primarily agricultural. The country as a whole has not modernized as much as the cities. The farmers are much more provincial.

BACKGROUND

133 The country has limited resources. The total area is less than 4,000 square miles, a third the size of Maryland, and most of it is mountainous. 311 The crop land is limited to the narrow coastal plain which averages only four miles in width, and to the numerous fairly small valleys in the mountains.

161 Lebanon always has had a great many more people than its agriculture can sustain. In the past this pressure was relieved by emigration, but restrictions of the past 25 years, at home and abroad, have checked the exodus and intensified the problem. The population is now about 1.2 million.

642 Progress has been encouraged by the government which is admittedly one of the most stable in the Middle East, despite its lack of experience. Lebanon became an independent Republic only in 1943, after the French mandate was ended. It has been remarkably independent and practical and has not allowed itself to become embroiled in nationalistic issues as many of the other Arab states have.

INDUSTRY

433 With few exceptions, industries are small and devoted chiefly to the production of light consumer goods such as matches, rubber goods, soap, furniture, cigarettes, beer, macaroni, biscuits, and olive oil. The two chief basic industries are the Iraq Petroleum Company's Tripoli topping plant and the Chekka cement factory. Other basic manufacturing plants include cotton textiles, glass, and sole leather.

AGRICULTURE

241 Roughly a third of the tilled land is devoted to cereals and the balance to a wide variety of crops—fruit trees, vineyards, vegetables, and a number of industrial crops including cotton. Approximately 15 per cent of this area is left fallow each year.

The western plains receive 20 to 35 inches of rainfall a year, and that only during the winter months. Because of the dry summers, a few of the crops

165 evade punishment by concealing the death
369 of unregistered infants detract from the
validity of the meager data available. Local
165 pediatricians believe that the mortality rate
in children up to 2 years of age averages
from 25 to 30 per cent for the country as
a whole. It ranges from 10 to 15 per cent,
or more, in Beirut proper to from 30 to 45
per cent in Tripoli, Sidon and the towns of
165 the interior. In the more remote villages of
511 South Lebanon, the standards of living are
uniformly low, and the mortality in chil-
dren under 2 years of age probably reaches
50 to 70 per cent. Intestinal diseases are
foremost among the causes of death in in-
fancy and early childhood.

Social Economy

241 The economy of Lebanon is based upon
484 agriculture, but the country is in a more
167 favorable position than the neighboring
Arab states, in that the national income is
augmented by an increasing tourist traffic
and by remittances to their families from
241 emigrants living abroad. Although the
311 coastal plain and the Bekaa valley support
a variety of crops, a large part of the terri-
tory is mountainous and unsuitable for cul-
tivation. The coastal region is cultivated
intensively, with a series of narrow terraces
extending along the seaward slopes of the
Lebanon range up to an elevation of about
3,000 feet. Little more than 20 per cent of
the total land area is now under production,
while less than one fifth of that is irrigated.
Considerable disparity exists between re-
cent estimates of the amount of arable land,
but all agree that it can be increased ma-
terially by a greater utilization of the avail-
able water resources and by improved
653 methods of cultivation. Programs have al-
ready been initiated for the further devel-
opment of irrigation facilities, notably in
the southern Bekaa, and in the 'Akkar
plain, a triangular sector between the coast
421 and the northern frontier with Syria. The
tradition of private ownership is strong in
the mountainous districts of the north, and
most of the land is cultivated by independ-
ENT FARMERS.

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000 brought some capital with them and started new enterprises. Another important
315 factor was the impact on Lebanon of the development of Middle Eastern petroleum
382 resources, an impact which exceeded that exerted on any other non-producing
434 country in the region. Three pipelines have their termini in Lebanon: two Kirkuk-Tripoli lines, completed in 1934 and 1949, and the line connecting the Arabian oilfields with Sidon, completed in 1950. A refinery was built in
457 Tripoli and another near Sidon. Lebanon has also benefited from the location
439 of offices of oil companies in Beirut. In addition, it has received many
651 tourists, as well as some capital, from the oil producing countries and has
434 supplied exports to these countries: for example, fresh fruit and vegetables sent by air or truck or, more recently, by refrigerated ships. Finally, royalties paid to the Government by the oil companies for pipeline use have increased in recent years.

434 The development of transit trade has also contributed to the national
653 income. The increase in such trade was made possible by enlargement and improvement of the port of Beirut shortly before the Second World War, development of inland communications, provision of refrigerated storage and other storage facilties and extension of the free zone in the harbour from 8,000 square metres in 1939 to 75,000 in 1952 and 106,000 in 1953. Although the development of Latakia has diverted some of Syria's trade, Beirut still handles a substantial proportion of that trade as well as a large fraction of that of Jordan, which previously passed through Haifa. The opening of a new airport in Beirut, in 1950, has also stimulated transit of goods and passengers.

457 In recent years, Beirut has been the centre of a large and widespread gold trade. The relaxation and subsequent disappearance of exchange controls has also greatly increased the importance of Lebanon as an international financial centre. Tourism has increased in scope and continues to play a significant part in the country's economy.

Agriculture

241 Despite large-scale emigration to the cities and abroad, nearly half the
162 Lebanese population still earn a livelihood in agriculture. Since agriculture
312 accounts for less than one fifth of the national income (see table 43), per capita
311 income in agriculture is well below the average in other sectors. The possibilities for raising agricultural income by extending cultivation are, however, very limited. According to the latest estimates, of the total area of 1,038,000 hectares, 575,000 hectares consist of rocky, waste or built-up areas; 74,000 consist of forests; 115,000 are judged to be cultivable, though at present uncultivated; and 273,000 are undercultivation. Of the cultivated area, 48,000 hectares are irrigated and 225,00 are rainfed, but irrigation projects under way or due to be undertaken in the near future will bring 34,000 hectares of rainfed land under irrigation. 1/ The reclamation of the 115,000 hectares judged to be cultivable would involve heavy capital outlay, since most of this land is mountainous. Hence, in recent years, efforts have been mainly concentrated on intensifying agriculture.

1/ Figures from an unpublished paper prepared in the Ministry of Agriculture in 1950. Cultivated land per capita of agricultural population is thus only about 0.4 hectare, of which less than a fifth is irrigated.

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This has been achieved by increasing production of fruit and vegetables, for both of which Lebanon has great natural advantages. The topography of the country and the unequal distribution of rainfall provide a diversity of climate which makes it possible to grow tropical fruits, sub-tropical fruits and fruits of the temperate zone. Soils are also sufficiently varied to suit a wide range of crops. Water is usually available in sufficient quantity, either as rainfall or from small-scale irrigation schemes. Plant diseases and pests are less prevalent than in most parts of the Middle East. The density of the rural population has made it profitable to concentrate on labour-intensive crops, while the relatively high level of education in country areas has encouraged innovation. The broken nature of the land has prevented large-scale mechanization, except in the plains, and has favoured crops which require little land, as has the prevalence of small-scale ownership. 1/ Finally, Lebanon's location has given it access to several important markets, such as Egypt for deciduous fruits, Syria and the Persian Gulf area for most fruits and vegetables, Palestine (until 1948) for vegetables, and Europe for early ripening varieties of citrus fruit and apples.

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The expansion of fruit and vegetable crops was made possible by heavy capital investment. New terraces were built on mountain slopes, and old ones were repaired and strengthened. Various small-scale works carried out since 1942 have substantially increased the irrigated area. The use of selected seeds has considerably increased, as has that of chemical fertilizers. Before the Second World War, some 5,000 tons of chemical fertilizers were imported into Lebanon and Syria yearly. In 1947, Lebanon alone used 8,500 tons 2/ and 1951-53 imports into Lebanon averaged 23,000 tons. Lastly, there has been a rapid expansion of refrigerated storage space facilities. 3/ The greater part of the necessary capital came from outside agriculture, especially from commercial profits and incomes earned in services; the irrigation works were financed through the budge

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The rise in output of fruit and vegetables may be illustrated by citrus fruit, which increased from 70,000 tons in 1944 to 100,000 tons in 1954 and

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1/ No general figures on land distribution are available but on the basis of information gathered in the course of a village survey jointly undertaken in 1953 by the Lebanese Office of Statistics and the United States Foreign Operation Administration, the following estimate may be made: some 10 per cent of the land is in holdings of 100 hectares and above and 15 to 20 per cent in holdings of 10 to 100 hectares; the total number of large and medium holders is 6,000. The remaining 70 to 75 per cent belongs to 150,000 smallholders, most of whom own less than two hectares. There are few landless labourers, and most of these rent land from the larger owners ("Proceedings of the Agricultural Credit Conference", Beirut, 12-14 October 1953).

2/ Sir Alexander Gibb and partners, The Economic Development of Lebanon (London, 1948), page 45. A breakdown shows that 42 per cent consisted of nitrogenous fertilizers, 35 per cent of superphosphates and 19 per cent of potash. Some 37 per cent of the total was applied to potatoes, 29 per cent to other vegetables and 35 per cent to fruit.

3/ The present capacity of refrigerators is estimated at over one million crates, or about 20,000 tons, Le Commerce du Levant, 1 October 1954. Capital invested in refrigeration totalled £L 6 million in 1952, and has considerably increased since then.

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652 The Akkar irrigation scheme in northern Lebanon, which at present irrigates 2,800 hectares, is scheduled to cover a total of 10,000 hectares, of which 7,500 are to receive perennial irrigation and 2,500 spring irrigation. Total costs, including the completed portion, were estimated at LL 6 million; it is expected that work on the project will be finished by 1958.

Lake Yammouneh, in north central Lebanon, at present provides 2,500 hectares with spring irrigation and 800 hectares with summer irrigation; these figures are to be raised to 10,000 and 1,000 hectares, respectively. The cost involved is LL 3 million, in addition to LL 1.5 million already spent. No date has been set for completion. Irrigation from the Orontes River, in northern Lebanon, which is at present received by 1,000 hectares, could be extended to an additional 4,000; no detailed plans have as yet been worked out.

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377 Both Lake Yammouneh and the Orontes River form part of a seventy-five-year concession granted to a private company for the generation of electricity. Turbines with a capacity of 6,000 kilowatts will be erected on Lake Yammouneh and a further 3,000 kilowatts may be added later; generators with a capacity of 5,000 kilowatts, providing an estimated 65 million kilowatt-hours per annum, will be set up on the Orontes. The total cost, including transmission lines, is estimated at LL 12 million; a further unspecified sum may be spent on lining the bed of Lake Yammouneh, to prevent seepage. The capital of the concessionary company is LL 20 million; of this 60 per cent has been subscribed by Lebanese residents and emigrants and it is hoped to raise the balance from Kuwait and other foreign countries.

The Nahr Ibrahim hydroelectric works have a firm capacity of 1,500 kilowatts and a maximum capacity of 4,200; built by a concessionary company, they began operating in 1950, and in 1953 supplied 20 million kilowatt-hours of electricity. In 1954, the company was authorized to increase its capital from LL 1 million to LL 11.75 million. The Government has also proposed to guarantee a LL 4 million loan to be advanced to the company by the Banque de Syrie et du Liban. A second power plant, with a maximum capacity of 12,000 kilowatts and an estimated annual output of 65 million kilowatt-hours, is to be built, at a cost of LL 10 million, including a dam and other installations; it is hoped to complete the project in 1957, after which a third plant, with a capacity of 12,000 kilowatts is contemplated. A thermal station at Zouk, with a capacity of 15,000 kilowatts, is scheduled for completion by the end of 1955; its capacity will be doubled shortly after. 1/

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312 The Litani River project, which provides for both irrigation and power, is the most important scheme under study in Lebanon. It aims at irrigating, at a total cost of LL 32 million, 18,600 hectares 2/ of which 10,400 are in the Bekaa plain and 5,900 in the coastal plain, the rest being along the intermediate stretch of river. At the same time, power will be provided by

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1/ Le Commerce du Levant, 10 October 1954.

2/ This figure is exclusive of the 4,500 hectares in the Kneisieh scheme, which will also be irrigated by the Litani River. In addition, the Litani scheme will provide seasonal irrigation for 2,900 hectares.